

P A T E N T C L A I M S

- Sub 1
1. Thermocycler having a heating plate (1) which forms a heating surface (3) for holding a microtitre plate (13) whose wells (15) are held in indentations (4) provided in the heating surface (3), and having a cover (14) which can be lowered and raised relative to the heating surface (3), **characterized in that** a plurality of elastically compressible lifting elements (7) which, at least when the cover (14) is raised, project beyond the edges of the indentations (4) are distributed over the heating surface (3).
2. Thermocycler according to Claim 1, **characterized in that** the projection of the lifting elements (7) is at least 2 mm, preferably at least 5 mm.
3. Thermocycler according to Claim 1 ~~or 2~~, **characterized in that** the density of the lifting elements (7) is at least 1 per 30 cm².
4. Thermocycler according to ~~any of Claims 1 to 3~~, **characterized in that** each lifting element (7) is removably fixed to the heating surface (3).
5. Thermocycler according to ~~any of Claims 1 to 4~~, **characterized in that** each lifting element (7) is inserted into a blind hole (6) in the heating surface (3).
6. Thermocycler according to Claims ~~4 and 5~~, **characterized in that** the fixing of the lifting element (7) is effected by frictional locking with the walls of the blind hole (6).
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A 7. Lifting element for a thermocycler according to ~~any of~~
A Claims ~~1 to 6~~, characterized in that it comprises an
elongated spring element which is compressible in the
longitudinal direction and carries a contact part which
5 forms an abutting surface (12), oriented transversely
to the longitudinal direction, at the upper end of the
lifting element.

B1 8. Lifting element according to Claim 7, characterized in
that the contact part consists of plastic, preferably
10 PEEK, PTFE, FP, PPS or PI.

A 9. Lifting element according to Claim 7 ~~or 8~~,
characterized in that the spring element is in the form
of a coil spring (8) and the contact part is in the
form of a contact pin (9) which comprises a shaft (10)
15 surrounded by the upper part of the coil spring (8) and
a laterally projecting head (11) which rests on the
upper end of the coil spring (8) and whose upper
surface forms the abutting surface (12).

10. Lifting element according to Claim 9, characterized in
20 that the lowermost winding of the coil spring (8) is
somewhat wider.

A 11. Lifting element according to Claim 9 ~~or 10~~,
characterized in that the contact pin (9) is
rotationally symmetrical.

25 12. Lifting element according to Claim 11, characterized in
that both the shaft (10) and the head (11) of the
contact pin (9) are essentially cylindrical.

- 5 14. Lifting element according to ~~any of Claims 7 to 13,~~
characterized in that its spring constant is at least
5 N/mm.

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	